

EXHIBIT 13

CASSANDRA MOSELEY

I, Cassandra Moseley, declare as follows:

1. I am the vice president for research at Colorado State University (“CSU” or “University”) in Fort Collins, Colorado. I have held that position since January 2024.
2. I have personal knowledge of the contents of this declaration or have knowledge of the matters based on my review of information and records gathered by CSU personnel, and could testify thereto.
3. CSU receives substantial annual funding from the National Science Foundation (“NSF”). In fiscal year 2024, CSU received \$39.6 million in total funding from the NSF. This includes \$10.8 million in indirect costs. CSU has 374 active awards with a total obligated amount of \$183.9 million of which \$49.1 million is indirect cost.
4. CSU intends to apply for new funding awards, and/or renewals and continuations of existing funding awards, in the next year and in future years to come.
5. The funding CSU receives from NSF supports critical and cutting-edge research that is vital to our nation’s security, benefits American businesses, and improves human health. Millions of Americans benefit from and depend on this research. For example:
 - a. CSU’s advanced materials research supports innovations in energy harvesting, conversion, and storage – technologies that have the potential to drive more cost-effective domestic energy production and use across the United States, benefitting the US public and the US energy industry.
 - b. CSU’s research on materials and methods for semiconductor fabrication will enhance US innovation and decrease reliance on foreign sources of key components to produce electronics, solar cells, and thermoelectric devices.

- c. Chemical synthesis research at CSU focuses on enhancing reaction selectivity and efficiency, critical factors in pharmaceutical production. CSU innovations are currently used to produce some of the most common FDA-approved drugs, therefore advancing human health in the United States, and future research would have even greater impact.
- d. CSU's research addresses how cells absorb nutrients, regulate gene expression, and ensure accurate chromosome separation during cell division, which are key events in cancer, heart disease, and neurological conditions. Future research will be instrumental in the development of new strategies for disease prevention and treatment including individualized precision medicine, benefiting human health and society as a whole.
- e. CSU's plant research includes developing crop varieties that are more resource efficient (use less water and nitrogen) and more resistant to disease, helping farmers and strengthening America's food security.
- f. Artificial intelligence and mathematics research at CSU has benefits from fighting cybercrime and financial sector analysis to improving extreme weather prediction, estimation of insurance risk, and perfecting manufacturing practices. Thus, research has broad and significant impact on the security and prosperity of the American economy.
- g. Atmospheric research will result in better understanding and prediction of extreme weather events, including thunderstorms, hurricanes, atmospheric rivers, droughts, and heat waves. These efforts directly enhance public and

aviation safety and support long-term water resource management in the United States.

- h. Bioaerosols can harbor airborne pathogens, deliver allergens, influence precipitation, and cause crop damage. CSU research on the sources, transport, and deposition of biological particles in the atmosphere will elucidate their impact on aquatic and terrestrial microbial communities over large distances, benefitting agriculture and human health.
- i. Severe wildfires in the western U.S. often lead to health problems due to smoke inhalation and dangerous post-fire hazards such as flooding and debris flows. CSU research improves health outcomes and helps identify regions at highest risk, enabling more effective emergency response.
- j. CSU's research has a direct impact on workforce training and placement in the private sector with jobs ranging from pharmaceutical and biotech companies to quantum computing and software development. CSU graduates also go on to positions as scientists in national laboratories and universities, non-profit organizations, and governmental agencies.

6. Reimbursement of CSU's indirect costs is essential for supporting this research. NSF's cutting of indirect cost rates to 15% would likely preclude carrying out the kinds of research projects described in paragraph 5 in the future.

7. Indirect costs include constructing and maintaining state-of-the-art laboratories and other facilities required to meet the current technical requirements of advanced research, and procurement and maintenance of equipment necessary to conduct such research, such as

specialized testing environments, precision instrumentation and laboratory safety systems. Without this critical infrastructure, we simply cannot conduct the research.

8. For example, with respect to the areas of research described in Paragraph 5:

- a. Material science research for improved or new energy applications necessitates specialized equipment including electron microscopes and highly sensitive spectrometers. Photovoltaic cell development requires specialized facilities for material sublimation, deposition, and precision cutting.
- b. Research on materials and methods for semiconductors utilizes electron microscopes, mass spectrometers, and clean room facilities. High-power laser research that advances development of semiconductor manufacturing requires highly specialized optical and electronic equipment, vibration-proof facilities, and ultra-clean laboratories.
- c. Synthetic chemists utilize nuclear magnetic resonance equipment, mass spectrometers, spectroscopy instruments, gas and liquid chromatography instrumentation, and powerful computers for machine learning modeling.
- d. Cell biology research relies on super-resolution microscopes, electron microscopes, X-ray crystallography facilities, protein purification equipment, genomic sequencing facilities, cell sorting equipment, animal facilities, and the ability to transfer large datasets over the internet.
- e. Plant research requires facilities to grow the plants, light microscopes, spectrophotometers and genetic sequencing facilities.
- f. High performance computers (HPC) are needed for artificial intelligence (AI) research. Machine learning in particular uses significant computational power

to train models on large datasets. Many NSF-funded fields of research at CSU make significant use of HPCs and AI, with atmospheric research and synthetic chemistry as prime examples. Future research will rely even more on these advanced computing resources.

- g. Several lines of research and workforce training activities make use of machine shops, electronics shops, and rapid prototyping and statistics lab facilities.

9. Physical facilities costs are one of the largest components of indirect costs. This includes not only the usual costs of constructing and maintaining buildings where research occurs, but the very high costs of outfitting and maintaining specialized laboratory space, which can require special security, advanced HVAC systems, and specialized plumbing, electrical systems and waste management, as well as specialized laboratory equipment. The features and amount of space available to researchers have a direct and obvious impact on the nature and amount of research that can be done at CSU.

10. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NSF. These mandates serve many important functions, including ensuring research integrity; protecting research subjects; properly managing and disposing of chemical and biological agents and other materials used in research; managing specialized procurement and security requirements for sensitive research; managing funds; preventing technologies and other sensitive national security information from being inappropriately accessed by foreign adversaries; providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data; ensuring compliance with specialized security protocols and safety standards; maintaining facility

accreditation and equipment calibration to meet research quality and security standards; and preventing financial conflicts of interest.

11. Recovery of CSU's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

12. Through fiscal year 2026, the predetermined indirect cost rates are 54% for on-campus organized research, 26% for off-campus research; 35% for on-campus other sponsored activities, and 24% for off campus other sponsored activities. These rates are applied to the modified total direct costs (i.e., the direct costs as modified per the CFR)

13. The effects of a reduction in the indirect cost rate to 15% would be devastating. Of the \$39.6 million in NSF funding that CSU received in fiscal year 2024, approximately \$27.1 million consisted of payment of direct costs, \$1.7 million was received under subcontracts (which are eligible for limited indirect cost reimbursement) and \$10.8 million consisted of reimbursement of indirect costs. Similarly, in fiscal year 2025, CSU expects to receive \$27.1 million in NSF funding for direct costs and \$10.8 million in NSF funding for indirect costs. And over the next five years, CSU anticipates receiving an average of \$27.1 million from the NSF for annual direct costs. Based on the predetermined indirect cost rates, which were agreed upon by the federal government as of 4th of September 2024, CSU thus expects to receive approximately \$10.8 million in indirect cost recovery on an annual basis.

14. If—contrary to what CSU has negotiated with the federal government—the indirect cost rate was reduced to 15% for new awards, that would reduce CSU's anticipated annual indirect cost recovery by \$7.7 million to \$3.1 million.

15. This reduction would have damaging effects on CSU's ability to conduct research from day one. This will necessarily and immediately result in staffing reductions across the board. For example:

- a. CSU's Office of Sponsored Programs, compliance staff, IT staff, and research administrators staffed within the individual colleges are charged with reviewing and managing all extramurally sponsored research ensuring the safety and security of this research, and ensuring that all data, and the expenditure of research funding is conducted in compliance with all federal regulations and requirements. Without appropriate funding for indirect costs from the NSF, CSU would have to reduce staffing in these critical areas by an estimated 6 full time personnel, which would immediately impact its ability to ensure the effective and compliant management of our research projects, programs, and funds. This would in turn lead to substantial delays in critical research that relies on these compliance and administrative functions, including projects funded by the NSF. Moreover, recruiting staff who have the requisite knowledge, experience, to work on such projects is difficult. Even if funding were later restored, it would be difficult to find qualified individuals to fill these positions. Ultimately, top scientists will not move to (or stay at) the University if we cannot provide the facilities necessary to conduct world-class research.

16. CSU has for decades relied on the payment of indirect costs. And until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD

students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. And in some cases, CSU has long-term obligations—for example, tenured faculty salaries or admitted PhD students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments. This multi-year budgeting process also assumes the availability or possibility of grant renewals at roughly similar terms – and certainly at the negotiated indirect cost rate – as had been previously available.

17. In addition to the immediate effects and reliance interests described above, dramatically cutting indirect cost reimbursement would have longer-term effects that are both cumulative and cascading. For example, reductions in indirect cost recovery would, over time, degrade research infrastructure such as buildings and equipment due to reduced funding to invest in maintenance and modernization and create gaps in safety and security due to inadequate staffing. These disinvestments would challenge CSU’s ability to restart projects even if funding were restored.

18. Disruptions to CSU’s research will also have negative effects in Fort Collins, and the Northern Colorado area, the state of Colorado, and the broader region. Approximately 8,150 Colorado residents were directly employed by CSU—and it collaborates with state and local partners to help solve regional challenges through joint research and innovation. CSU’s research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A massive reduction in CSU’s research budget would immediately and seriously jeopardize these contributions to the local region.

19. Finally, slowdowns or halts in research by CSU and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance. For example, CSU high-power laser research contributed to semiconductor lithography breakthroughs that make today's most powerful computer chips possible. Future research to maintain US leadership in this critical technology would be jeopardized by the proposed cap on indirect costs.

20. CSU cannot cover the funding gap itself. While CSU maintains an endowment, it is neither feasible nor sustainable for CSU to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery:

- a. The majority of CSU's endowment—around 96.7%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. CSU is not legally permitted to use those funds to cover research infrastructure costs.
- b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 4%, to ensure long-term financial stability for the institution.

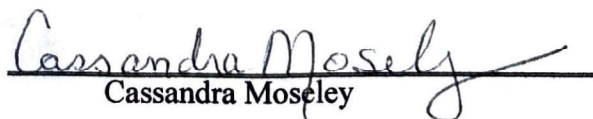
22. It is also not feasible or sustainable for CSU to use other revenue sources to offset shortfalls in indirect cost recovery. As a public institution of higher education, CSU reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, CSU does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students. Absorbing the cost of a lower indirect cost rate,

even if it were possible, would create long-term budget pressures on CSU—which would in turn force reductions in key investments supporting CSU’s faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain CSU’s academic excellence. So even if CSU could “cover” some of the indirect costs previously funded by NSF, it could do so only by negatively affecting other critical goals central to the institution’s mission.

23. If CSU’s can no longer apply for NSF grants because it is unable to accept the new indirect cost rate cap, the harms described herein would be exacerbated. That greater loss in funding from NSF would mean more significant cost-cutting measures would need to be adopted—and quickly. CSU cannot “float” all of the indirect costs it would likely lose coverage for – nor could it float NSF grants altogether if it is not able to accept the 15% cap – so some research projects would need to be terminated altogether, and others would need to be scaled down or pared back significantly. The process of identifying these cuts would need to begin immediately, and layoffs, closures, and research pauses or contractions would follow soon thereafter. Cutting back on CSU’s research in fields such as chemistry, biology, atmospheric science, mathematics and computer science, and artificial intelligence will also have long-term implications on national security and the American economy.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 5, 2025, at Fort Collins, Colorado.


Cassandra Moseley